REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 26-44 have been cancelled in favor of new claims 45-50. Support for the subject matter of the new claims is provided, for example, in the cancelled claims, Figs. 47-57, and paragraphs [0510]-[0570] of Applicants' published specification. The amendments were not presented earlier due to the unforeseeability of the remarks presented in the Final Rejection. Entry of these amendments is respectfully requested. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

A Replacement Sheet for Fig. 48B is submitted with a Submission of Proposed Drawing Amendment. Fig. 48B is amended in accordance with its description within the original specification.

Claims 26, 28, 29, 31, 34-40, and 42-44 were rejected, under 35 USC §103(a), as being unpatentable over Bjerke et al. (US 2007/0064831) in view of Medlock et al. (US 7,233,810). Claims 27, 32, 33, 41, and 44 were rejected, under 35 USC §103(a), as being unpatentable over Bjerke et al. (US 2007/0064831) in view of Medlock et al. (US 7,233,810) and Onggosanusi et al. (US 2002/0196842). To the extent that these rejections may be deemed applicable to new claims 45-50 presented herein, the Applicants respectfully traverse based on the points set forth below.

Claim 45 defines a transmitting apparatus that: (1) selects a mapping pattern, (2) outputs a first modulated signal and a second modulated signal, which is the first modulated signal re-

modulated by the selected mapping pattern, and (3) transmits the first modulated signal and the second modulated signal from a plurality of antennas, respectively. The second modulated signal is phase rotated with respect to the first modulated signal (see Fig. 53B for an exemplary, though non-limiting, illustration of such phase rotation). By transmitting a different modulated signal from each antenna, the claimed subject matter provides an advantage of improving the error rate performance of data transmitted a plurality of times (see paragraph [0080] of Applicants' published specification).

Bjerke discloses a general MIMO-OFDM transmission technology. However, the Final Rejection acknowledges that Bjerke does not disclose the above-noted features of the Applicants' claimed invention.

Medlock discloses, in Fig. 2A, a transmitting apparatus for which the relationship between "N" and "H" in UTU N 240n, which generates modulated signals, and antenna array H 201h is N>H. Thus, the N modulated signals generated in the UTUs are multiplexed by an antenna summer 150 into H signals and transmitted from an antenna array 101 (see Medlock col. 8, lines 62-65). Additionally, Medlock discloses generating 8PSK, using two UTUs and a QPSK modulation method, and transmitting the 8PSK signal from one antenna (see col. 19, lines 6-8).

However, Medlock does not disclose the Applicants' claimed subject matter of: (1) selecting a mapping pattern, (2) generating, using the selected mapping pattern, a second modulated signal from a first modulated signal, and (3) transmitting the first modulated signal and the second modulated signal from a plurality of antennas, respectively.

According to Bjerke, two QPSK signals outputted from symbol mapping section 222 are combined to generate an 8PSK signal that is inputted by IFFT section 224 and transmitted from a single antenna 124.

Consequently, even if the modulation section of Medlock is applied to the modulation section of Bjerke, this combination of Bjerke and Medlock would not provide a configuration for: (1) generating the Applicants' claimed second modulated signal, which is a modulated signal modulated once and re-modulated by a selected mapping pattern, and (2) transmitting the first modulated signal and the second modulated signal from a plurality of antennas, respectively. Onggosanusi is not cited in the Final Rejection for supplementing the teachings of Bjerke and Medlock with respect to this distinguishing subject matter.

Accordingly, the Applicants submit that the teachings of Bjerke, Medlock and Onggosanusi, even if combined as proposed in the Final Rejection, still would lack the above-noted features of claim 45 and thus these references, considered individually or in combination, do not render obvious the subject matter now defined by claim 45. Independent claim 48 similarly recites the above-mentioned subject matter distinguishing apparatus claim 45 from the applied references, but with respect to a method. Therefore, allowance of claims 45 and 48 is deemed to be warranted. The dependent claims are allowable due to their dependence from an allowable independent claim and also due to their recitation of subject matter that provides an independent basis for their individual allowability.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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JEL/DWW/att

James E. Ledbetter
Registration No. 28,732

Attorney Docket No. 009289-05197
Dickinson Wright PLLC
1875 Eye Street, NW, Suite 1200
Washington, DC 20006
Telephone: (202) 659-6966
Facsimile: (202) 659-1559